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PUBLIC UTILITIES
COMMISSION

The Honorable Chairman and Members
of the Hawaii Public Utilities Commission
Kekuanaoa Building, First Floor
465 South King Street
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 2008-0083 – Hawaiian Electric 2009 Test Year Rate Case
Hawaiian Electric's Supplemental Response to PUC-IR-193

On January 8, 2010, Hawaiian Electric Company, Inc. ("Hawaiian Electric") filed its responses to PUC-IRs 192 and 193, issued by the Commission to Hawaiian Electric on January 6, 2010.[1]

Enclosed for filing is Hawaiian Electric's supplemental response to PUC-IR-193.

Very truly yours,

Enclosures

cc: Division of Consumer Advocacy
Michael L. Brosch, Utilitech, Inc.
Joseph A. Herz, Sawvel & Associates, Inc.
Dr. Kay Davoodi, Department of Defense
James N. McCormick, Department of Defense
Theodore E. Vestal, Department of Defense
Ralph Smith, Larkin & Associates

[1] The IRs issued by the Commission on January 6th were numbered as PUC-IR-190 and PUC-IR-191. For reference purposes, Hawaiian Electric renumbered them as PUC-IR-192 and PUC-IR-193 to follow in sequential order from the IRs previously submitted by the Commission.

PUC-IR-193

Please identify the benefits of utilizing CT-1 as a peaking unit, including any cost savings, to ratepayers through such use. To the extent possible, please quantify the benefits.

Hawaiian Electric Supplemental Response:

This supplemental response provides additional information and clarification of the benefits of utilizing CIP CT-1. As explained below, the benefits are 1) increased system reliability, and 2) additional black start capability.

1. Increased System Reliability

   The primary benefit of having CIP CT-1 available is the elimination of the reserve capacity shortfall and restoring generating capacity above what is needed to meet Hawaiian Electric's generating system reliability guideline of 4.5 years per day. This guideline means that there needs to be enough firm capacity available to the system such that the likelihood of having an interruption of service to customers due to a shortfall of generating capacity due to unplanned generating unit outages is not more than one day every 4.5 years.[1] Eliminating the reserve capacity shortfall reduces the probability of not having enough generation to serve the load, and improves generation reliability to a level above the minimum guideline.

   As expressed in the Company's September 16, 2009 letter and in its response to PUC-IR-117 in Docket No. 2008-0083 (pp. 13-15), Hawaiian Electric will use (i.e., commit) CIP CT-1 on a limited basis under emergency circumstances. The letter defines

[1] The planning guideline has been used by the Commission in cases approving the addition of firm capacity, including the capacity provided by CIP CT-1, AES Hawaii and Kalaeloa Partners. It should also be noted that the Consumer Advocate has recommended potential consideration of a more stringent guideline. See the Consumer Advocate's response to PUC-IR-117.

emergency circumstances as Generation Condition ("Gen Con") 1, 2, 3 and 4. Under these circumstances, the Company would commit all available generating units, including CIP CT-1.

Ideally, for Gen Con Alpha (i.e., normal conditions where reserve capacity is available), the Company will only need generation from the independent power producers and its base load and cycling units to meet its spinning reserve needs. For non-emergency conditions when Gen Con Alpha cannot be sustained with only base load and cycling units, Hawaiian Electric would also commit peaking units. This situation occurs when the base load and/or cycling units may be impaired, on scheduled maintenance or on forced outage, and/or customer demand for power is higher than usual. In such situations, the Company will need to commit its peaking units – Waiau 9 ("W9"), Waiau 10 ("W10"), its distributed generation ("DG") units and/or CIP CT-1 – to keep the system in Gen Con Alpha. The peaking unit(s) that the Company will commit will depend on the extent and expected duration of the spinning reserve deficit. This is because the units have different capacities, and different heat rate characteristics at different levels of output and therefore different economics depending on the level of need.

If the spinning reserve deficit is only a few megawatts ("MW") for a few hours, the Company will usually commit the DG units because they have the lowest heat rates at low levels of output.

If the spinning reserve deficit is on the order of 100 MW for the peak load period of the day, the choice would change. For example, if the Company were allowed to run

CIP CT-1 on diesel fuel, CIP CT-1 would be the unit of choice because it would have more favorable economics than W9 and W10 given the respective heat rates for equivalent megawatt output levels for these units. If CIP CT-1 were run on biodiesel, it may or may not be the unit of choice depending on the cost of biodiesel compared to petroleum diesel. (Because the DGs can only produce up to 30 MW, they would not be used in this situation.)

If the spinning reserve deficit is somewhere in the middle (i.e., greater than 30 MW and less than 100 MW), the results would be mixed between using W9, W10, and/or CIP CT-1 (running on diesel).

The Company estimates, that CIP CT-1 (run on diesel) would be the preferred solution 25 to 50 times a year to meet spinning reserve needs to sustain Gen Con Alpha.

2. Additional Black Start Capability

CIP CT1 supplements the black start capabilities at Waiau and Kahe generating stations. Having CIP CT-1 available will benefit customers by providing a third black start capable unit to the HECO system in the event of an island-wide blackout, improving the time to begin restoration of service.